

IN THE CLAIMS:

~~1. A method for inactivating viruses in a body fluid, comprising the steps of:~~

~~forming a mixture including a therapeutically effective amount of the methylene blue and an amount of a body fluid in a container under sterile conditions; and~~

~~irradiating the mixture with a light field of a suitable intensity and wavelength for activating the methylene blue for a time sufficient to inactivate viruses in the mixture, while maintaining the mixture in a substantially static state within the container.~~

2. The method of Claim 1 wherein the body fluid is a blood component.

3. The method of Claim 2 wherein the blood component is selected from the group consisting of: plasma, red blood cells, white blood cells, leukocytes, bone marrow and platelets.

4. The method of Claim 1 wherein the container is made of a plastic.

5. The method of Claim 1 wherein the step of forming the mixture comprises the step of adding the methylene blue to a container in which the body fluid is already stored.

6. The method of Claim 1 wherein the container is made of a polyvinyl chloride material.

7. The method of Claim 1 wherein the step of forming the mixture comprises the step of adding the body fluid to a container including methylene blue.

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8. ~~The method of Claim 1 wherein the container~~
includes at least an inner surface made of a non-
polyvinyl chlorine material.

9. The method of Claim 1 wherein the step of
irradiating includes the step of transporting the mixture
in the container on a conveyer by at least two light
sources.

10. The method of Claim 1 comprising the further
step of allowing excess methylene blue to leach out into
the container after the irradiation step.

11. The method of Claim 1 wherein the light field
is generated by at least one light emitting diode.

12. The method of Claim 1 wherein the light field
is generated by at least one array of light emitting
diodes.

13. The method of Claim 1 wherein the mixture is
irradiated by the light field for a cumulative period of
at least five minutes.

14. An apparatus for inactivating at least viruses
in a body fluid with methylene blue comprising:

a pair of light sources disposed so as to face each
other with a gap therebetween, the light
sources generating a light field of suitable
wavelength and intensity to activate methylene
blue; and

a support surface in the gap on which a container
containing a mixture of the body fluid and a
therapeutically effective amount of methylene
blue can be supported for a time sufficient to
allow viruses to be inactivated.

15. The apparatus of Claim 14 wherein the support
surface comprises a transport associated with the light
~~source and configured to transport the container~~

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~~enclosing the mixture of the body fluid and a therapeutically effective amount of the methylene blue along a path of travel and within the light field generated by the light sources.~~

5 16. The apparatus of Claim 15 wherein the transport comprises a conveyor.

17. The apparatus of Claim 15 wherein the transport can be adjusted to transport the container within the light field for varying periods of time.

10 18. The apparatus of Claim 14 wherein the light sources comprise light emitting diodes.

19. The apparatus of Claim 14 wherein the light sources comprise arrays of light emitting diodes.

15 20. The apparatus of Claim 14 further comprising a sensor disposed to sense the amount of light delivered to the container.

21. The apparatus of Claim 14 wherein the sensor senses the amount of light transmitted through the mixture.

20 22. The apparatus of Claim 14 further comprising a sensor disposed and configured to sense light delivered to said mixture and a processor coupled to said light source and sensor, said processor configured to monitor the cumulative amount of light delivered to the mixture.

25 23. An apparatus for use in inactivating viruses in a body fluid, comprising:

 a conveyor on which can be transported a container enclosing a mixture including a body fluid to be virally inactivated and a therapeutically effective amount of methylene blue; and

30 a light source associated with said conveyor, said light source configured to generate a light ~~field of a suitable intensity and wavelength~~

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~~to activate methylene blue, said conveyor~~
configured and associated with said light
source so as to convey said container within
said light field for a time period of
sufficient duration to allow said methylene
blue to be activated.

24. The apparatus of Claim 23 wherein said light
source comprises an array of light emitting diodes.

25. The apparatus of Claim 24 wherein said light
source comprises a plurality of successive arrays of
light emitting diodes.

26. The apparatus of Claim 23 further comprising
a sensor associated with the light field so as to detect
light delivered to the mixture.

27. The apparatus of Claim 23 wherein the light
field is generated by facing arrays of light emitting
diodes between which the container is transported.

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